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REMARKS

Claims 1-44 are pending in the application. The amendments were made to place the application in a more suitable form prior to examination. Favorable consideration is respectfully requested.

Respectfully submitted,

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Attachment to Preliminary Amendment dated July 18, 2001

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Page 1, Paragraph Beginning at Line 22

An essential aspect of color communication lies in the differentiation whether apparatus dependent or apparatus independent color spaces are used. If apparatus independent color spaces are used, the color profiles assigned to the pictures or input and output apparatus still allow a precise color communication. The corresponding mechanisms were defined, for example by the ICC (International color consortium). The apparatus specific color spaces are thereby specified by so-called apparatus profiles. The generation of such an apparatus profile can be read up on, for example, in the ICC specification "Spec ICC.: 1998 - 09", hereby incorporated by reference in its entirety.

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Page 1, Paragraph Beginning at Line 30

The use of these measured parameters for transmitting the measured data of individual colors (spot colors) or of color tables or atlases is described in detail, for example, in the ANSI standard IT8.7/2-1993 (graphic technology-color reflection target for input scanner calibration), hereby incorporated by reference in its entirety. Especially one possibility is illustrated therein of how different colorimetric or spectral measured data from individual color fields can be packaged into a file format.

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Page 2, Paragraph Beginning at Line 10

Human color perception, however, is not only influenced by the measured values of the color itself, but also by influences of the surrounding fields, for example, the absolute brightness of the color, the neighboring colors, and so on. In the CIE publication CIE 131-1998 (The CIE 1997 interim color appearance model (simple version) CIECAM 97s), hereby incorporated by reference in its entirety, and other publications, mathematical models of how some of these effects can be mathematically modeled are defined.

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Page 6, Paragraph Beginning at Line 10

[The invention will be further described in the following with reference to a preferred embodiment and in connection with the drawing, wherein] Other objects and advantages of the present invention will become more apparent from the following detailed description of preferred embodiments, when read in conjunction with the accompanying drawings wherein like elements have been represented by like reference numerals and wherein:

[Figure] Fig. 1 shows the principle schematic drawing of the process in accordance with invention for producing a color information data file;

[Figure] Fig. 2 shows a graphic representation of a data exchange format as used in the process in accordance with the invention; and

[Figure] Fig. 3 shows a principle schematic diagram of the color communication process in accordance with invention.

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Page 7, Paragraph Beginning at Line 24

The hierarchically organized object structure of the data objects is formed on the basis of a page description language, especially the Extensible Markup Language (XML). This allows a universal, largely platform independent and language independent data exchange format. Details to XML are extensively documented in, for example, the Addison Wesley publication "XML in the practice; professional Web publishing with the extensible markup language", hereby incorporated by reference in its entirety.

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Marked-up Claims 1-10, 12, 16-31, and 35-38

1. (Amended) Process for producing an electronic color information file for color communication, [which] wherein the file includes [a] at least one data set describing the color impression of at least one [or more color samples] color sample, [whereby] comprising the steps of:

making available the at least one data set [is made available] in a processor; and [and stored] storing the at least one data set in a preselected data format in the color information file, [so] such that all the information data associated with the at least one color [samples] sample and at least one of identifying, characterizing [or], and supplementing the at least one color [samples,] sample are stored as information data containing data objects in an open, expandable, hierarchically organized object structure in the color information file.

2. (Amended) Process according to claim 1, wherein each data object is labeled with a characterizing type description [(tag)] selected from a group of predefined type descriptions [(tags)], [whereby] wherein the type description provides details on the structure and content of the data object, and the data type description [(tag)] of the data object is stored in the color information file in defined relation to the information data of the data object.

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- 3. (Amended) Process according to claim 1, wherein at least one data object itself includes at least one [or more] hierarchically subordinate data [objects, whereby] object, wherein each subordinate data object is labeled with a characterizing type description [(tag)] selected from a predefined group of type descriptions [tags], [whereby] wherein the type description provides details on the structure and content of the data object, the type description [(tag)] of the subordinate data object being stored in the color information file in defined relation to the information data of the subordinate data object.
- 4. (Amended) Process according to claim 3, wherein a name is associated with at least one of the data object of the uppermost level of the hierarchy [and/or] and the data objects respectively subordinate to a data object, which name defines the respective data objects and is stored in the color information file in defined relation to the respective data objects.
- 5. (Twice amended) Process according to claim 3, wherein an explanatory description is associated with at least one of the data object of the uppermost level of the hierarchy [and/or] and the data objects respectively subordinate to a data object, which explanatory description defines the respective data objects and is stored in the color information file in defined relation to the respective data objects.

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- 6. (Amended) Process according to claim 1, wherein at least one data object includes a subordinate data object which represents a connection pointer [(hyperlink)] to another data object within or outside the color information file.
- 7. (Amended) Process according to claim 1, wherein all data objects are stored in at least one text format in the color information file.
- 8. (Amended) Process according to claim 1, wherein at least one data object includes a binary data object as information data, [whereby] wherein this binary data object is [preferably] stored in the color information file as symbols in MIME- compatible format.
- 9. (Amended) Process according to claim 1, wherein the hierarchically organized object structure of the data objects is built on the basis of a page description language[, especially the Extensible Markup Language (XML)].
- 10. (Twice amended) Process according to claim 2, wherein the step of storing of the information data which are associated with the at least one color sample [or color samples] and at least one of identify, characterize [or], and complement the at least one color sample [or samples] is carried out by arbitrarily selecting from a predefined group of data object types.

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- 12. (Amended) Process according to claim 10, wherein the predefined group of data object types includes at least data objects for spectral data and calorimetric data [(color vectors), and optionally device dependent color data].
- 16. (Amended) Process according to claim 12, wherein the predefined group of data object types additionally includes at least one of data objects for image data [and/or] and substrate describing data, [whereby] wherein the image data preferably represent structure information such as surface condition or graininess of the at least one color [samples] sample to be communicated.
 - 17. (Amended) Process according to claim 12, wherein the predefined group of data object types additionally includes data objects for supplementary data representable in at least one text format.
 - 18. (Amended) Process according to claim 1, wherein any combination of emission, remission and at least one of transmission spectra [and/or] and colorimetric data [(color vectors)] are stored in the color information file.
 - 19. (Amended) Process according to claim 18, wherein emission spectra of an illumination light source and remission spectra of the at least one color [samples] sample

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Marked-up Claims 1-10, 12, 16-31, and 35-38

are stored in the color information file [so] such that the illumination light source can be taken into consideration by way of a color model for the visual representation of the at least one color [samples] sample on a screen.

- 20. (Amended) Process according to claim 14, wherein an input profile and [preferably] several output profiles are assigned to a color sample and stored in the color information file, [which] and wherein the input profile is used to recalculate a color sample from a device dependent color space into a device independent color space, and [which] wherein the output profiles are used to recalculate the color location of the color sample from the device independent color space into a selected device dependent color space and to display the color location therein.
- 21. (Amended) [Process] <u>Communication process</u> for communicating [the] information relevant for visual color impression of a color sample set including at least one color sample, [whereby] <u>comprising the steps of:</u>

storing the information represented by at least one of measured data [and/or] and manually produced value data [is stored] at a transmitter end in a color information file[,]; and

transferring the color information file [is transferred] to a receiver by way of a communication medium and at the receiver end again displayed in visual form, wherein all

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Marked-up Claims 1-10, 12, 16-31, and 35-38

of identifying, characterizing [or], and supplementing the at least one color [samples] sample and at least one of identifying, characterizing [or], and supplementing the at least one color [samples] sample, being stored as information data containing data objects in an open, expandable, hierarchically organized object structure in the color information file.

- 22. (Amended) Communication process according to claim 21, wherein each data object is labeled with a characterizing type description [(tag)] selected from a group of predefined type descriptions [(tags)], [whereby] wherein the type description provides details on the structure and content of the data object, and the data type description [(tag)] of the data object is stored in the color information file in defined relation to the information data of the data object.
- 23. (Amended) Communication process according to claim 21, wherein at least one data object itself includes at least one [or more] hierarchically subordinate data [objects] object, whereby each subordinate data object is labeled with a characterizing type description [(tag)] selected from a predefined group of type descriptions [tags], whereby the type description provides details on the structure and content of the data object, the type description [(tag)] of the subordinate data object being stored in the color information file in defined relation to the information data of the subordinate data object.

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- 24. (Amended) Communication process according to claim 21, wherein a name is associated with at least one of the data object of the uppermost level of the hierarchy [and/or] and the data objects respectively subordinate to a data object, [which] and wherein the name defines the respective data objects and is stored in the color information file in defined relation to the respective data objects.
- 25. (Amended) Communication process according to claim 21, wherein an explanatory description is associated with at least one of the data object of the uppermost level of the hierarchy [and/or] and the data objects respectively subordinate to a data object, [which] and wherein the explanatory description defines the respective data objects and is stored in the color information file in defined relation to the respective data objects.
- 26. (Amended) Communication process according to claim 21, wherein at least one data object includes a subordinate data object which represents a connection pointer [(hyperlink)] to another data object within [or outside] the color information file.
- 27. (Amended) Communication process according to claim 21, wherein all data objects are stored in at least one text format in the color information file.

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- 28. (Amended) Communication process according to claim 21, wherein at least one data object includes a binary data object as information data, [whereby this] wherein the binary data object is [preferably] stored in the color information file as symbols in MIME-compatible format.
- 29. (Amended) Communication process according to claim 21, wherein the hierarchically organized object structure of the data objects is built on the basis of a page description language[, especially the Extensible Markup Language (XML)].
- 30. (Amended) Communication process according to claim 22, wherein a predefined amount of data object types is made available, which define the type and structure of typical information data at least one of identifying, characterizing [or], and supplementing a color sample, an arbitrary selection of data object types from at least one of the predefined amount of data object types [or] and an arbitrary combination of these data object types being used for storage of the information data assigned to the at least one color sample [or color samples] and at least one of identifying, characterizing [or], and supplementing the at least one color [samples] sample.

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- 31. (Amended) Communication process according to claim 30, wherein the predefined group of data object types includes at least data objects for spectral data and calorimetric data [(color vectors), and optionally device dependent color data].
- 35. (Amended) Communication process according to claim 30, wherein the predefined group of data object types additionally includes data objects for at least one of image data [and/or] and substrate describing data, whereby the image data preferably represent structure information [such as surface condition or graininess] of the at least one color [samples] sample to be communicated.
- 36. (Amended) Communication process according to claim 30, wherein any combination of emission, remission and transmission spectra [and/or], and calorimetric data [(color vectors)] are stored in the color information file.
- 37. (Amended) Communication process according to claim 36, wherein emission spectra of an illumination light source and remission spectra of the at least one color [samples] sample are stored in the color information file, and at the receiving end the illumination light source is taken into consideration by way of a color model and the stored emission spectra for the visual representation of the at least one color [samples] sample on a screen.

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38. (Amended) Communication process according to claim 31, [characterized in that] wherein an input profile and [preferably] several output profiles are assigned to a color sample and stored in the color information file, [that] and wherein the color sample is recalculated from a device dependent color space into a device independent color space, and [that] wherein the color location of the color sample is recalculated by way of the output profiles from [this] the device independent color space into a selected device dependent color space and displayed therein.